GRAPHIC COMMUNICATIONS TECHNOLOGY 10

Description

This course introduces students to many careers associated with graphic communications. Areas which will be explored are desktop publishing, scanning, page layout, computer operations, design fundamentals, computer to digital duplicating in an array of single and two color works with emphasis on color design. Also, various bindery operations (folding, paper cutting, collating, stitching, tape and spiral binding) will be explored. There are fun and practical projects created in this course are T-*shirts, magazine covers, posters, notebooks, colored post cards, note pads, note cube, stationery and decals.*

Course Overview

Course Objectives	Essential Questions	Assessments
Students should be able to: • use safely and efficiently, the resources, processes, concepts, and tools of the graphic communications industry. • understand and apply practical technological methods with a hands-on approach to graphic production. • develop the ability to design utilizing computer software and produce these designs utilizing production technologies. • develop a vocabulary for use in the graphic communications field.	• Why is it important to understand the history of the graphics and design industry and explore emerging trends and technologies? • Why is it necessary to identify safety and health procedures utilized in the classroom/lab environment? • How is each of us ultimately responsible for safety in the work/lab environment? • Why are calculating skills, units, and measurements fundamental to a career in Graphic Communications and Design? • How do the elements incorporated in basic graphic designs function together to create effective communication? • What difference does image formatting have on the outcomes of page design? • How does the function of typeface design impact a message? • How does the printing industry impact the world of information? • Why is it important to understand the role of the print industry in communication of ideas? • What are important production considerations in the use of binding for printed products when starting the design process?	• Projects • Quizzes and Tests on Unit Material

Content Outline	Standards	
I. Unit 1 – Professional Careers and Ethics II. Unit 2 – Environmental Health and Safety III. Unit 3 - Basic Math and Measurements for Graphic Communications IV. Unit 4 - Design and Layout V. Unit 5 - Typography VI. Unit 6 - Graphic Output Processes VII. Unit 7 - Bindery and Finishing Operations	https://www.georgiastandards.org/standards/Georgia%20Performance%20Standards%20CTAE/Introduction%20to%20Graphics%20and%20Design-gd.pdf https://www.georgiastandards.org/standards/Georgia%20Performance%20Standards%20CTAE/Graphic%20Output%20Processes.pdf	

Pacing Guide						
1st Marking Period				2nd Marking Period		
Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
Professional Careers and Ethics	Environmental Health and Safety	Basic Math and Measurements for Graphic Communications	Design and Layout	Typography	Graphic Output Processes	Bindery and Finishing Operations
2 weeks	2 weeks	4 weeks	1 week	3 weeks	3 weeks	3 weeks

Unit 1– Professional Careers and Ethics, 2 weeks top

Standards
ACCT-IGD-1 Students will explore the different careers available in the field of graphic communications and the design industry.

ACCT-IGD-2 Students will identify key developments and individuals relating to the history of the graphics and design industry and explore emerging trends and technologies.

ACCT-IGD-3 Students will examine the professional and ethical issues involved in the graphics and design industry.

Unit Objectives
Students will be able to:
- compare and contrast careers in graphics and design, along with their education, training requirements, and salary ranges.
- demonstrate understanding of education and career development as a lifelong learning process.
- describe the development of the printing industry.
- explain ethics issues for the graphics/design business.

Essential Question
- Why is it important to understand the history of the graphics and design industry and explore emerging trends and technologies?

Focus Questions
- What careers are available in the field of graphic communications and the design industry?
- What is the importance of understanding ethics issues for the graphics/design business?
- What are consequences of copyright infringement?

Assessments
- Quizzes on Unit subject matter
- Projects using the computer: Develop a list of career opportunities within the graphics/design industry.
- Research gender and diversity issues in print/graphics industry.
- Research and present information on industry focus and trends.
- Create a timeline of the history of printing.
- Design and produce an art product, request a copyright, and use copyright guidelines for registering the product

Skill Objectives
Students will:
- identify the certificates, diplomas, and degrees available.
- identify the college majors that are found in the area of graphics and/or design.
- identify gender and diversity related issues in graphics and/or design.
- list and describe professional organizations in the field of computing.
- identify persons with major contributions to the field of graphic design.
- outline the history of printing and graphic design and explain its effects on the print/design industry and society.
- identify and describe emerging trends and technologies.
- identify basic copyright issues for the graphics/design industry.
- explain the consequences of copyright infringement.

Unit 2 – Environmental Health and Safety, 2 weeks top

Standards
    ACCT-IGD-6 Students will explain and demonstrate how to operate equipment in a safe manner.
    ACCT-IGD-7 Students will identify safety and health procedures utilized in the classroom/lab environment.

Unit Objectives	Essential Questions	Assessments
Students will be able to: • explain and demonstrate safety procedures in the field of graphic communications. • explain the importance of following all regulations for workplace safety.	• Why is it necessary to identify safety and health procedures utilized in the classroom/lab environment? • How is each of us ultimately responsible for safety in the work/lab environment? **Focus Questions** • When using equipment, why should you be able to identify safety features of each piece used? • Why is it important to know procedures for handling hazardous and combustible materials? • Why does each participant involved in production need to take responsibility for the use of proper personal protection equipment?	• Projects • Quizzes and Tests on Unit Material **Skill Objectives** Students will: • identify safety features. • describe proper personal protection equipment needed. • identify procedures for handling hazardous and combustible materials. • identify location of safety and first aid equipment. • identify procedures for emergency situations. • identify procedures for handling hazardous and combustible materials (MSDS, OSHA). • describe OSHA, MDSD, and EPA. • describe Lockout and Tagout. • explain Right to Know.

Unit 3- Basic Math Measurements for Graphic Communications, 4 weeks top

Standards
ACCT-IGD-8 Students will estimate job costs.
ACCT-IGD-9 Students will recognize and utilize paper and assorted substrates for commercial output.
ACCT-IGD-10 Students will generate and manipulate various graphic imaging processes.
ACCT-IGD-11 Students will identify and apply typographic and design concepts.
ACCT-IGD-12 Students will analyze pre-press and output operations.

Unit Objectives
Students will be able to:
- utilize calculating skills, units, and measurements fundamental to a career in Graphic Communications and Design.
- investigate efficient production methods to minimize paper waste during jobs
- determine size, weight, quantities, type, and amount of paper necessary for fulfilling a job order
- manage resolution issues
- examine and construct documents with multiple measurement systems used in the field (including inches and picas).
- position images on substrates using appropriate measurements
- understand adjustments that may be needed in the equipment and materials used for output.

Essential Question
- Why are calculating skills, units, and measurements fundamental to a career in Graphic Communications and Design?

Focus Questions
- Why is it essential to calculate price of materials before beginning a project?
- What difference does it make to discern appropriate use of technology in areas of color and design?
- Why does one need to understand and accurately execute measurement conversions?

Assessments
- Projects
- Quizzes and Tests on Unit Material

Skill Objectives
Students will:
- calculate price of materials used in commercial jobs.
- identify linear, liquid, weight, and area measuring units.
- select paper that fulfills work order and determine cost.
- discern appropriate use of technology in areas of color and design choices.
- evaluate photographic digital input techniques for maximum effect.
- assess the issues of sizing images in various forms.
- select and use appropriate type composition techniques involving leading, tracking, kerning, scaling, and aligning based on job particulars.
- understand and accurately execute measurement conversions.
- determine and use proper imposition to save materials used in multi-page and multi-piece projects.

Unit 4 – Design and Layout, 1 week top

Standards

ACCT-IGD-13. Students will understand and demonstrate how to design a page layout.

ACCT-IGD-14. Students will identify the five elements incorporated in basic graphic designs and will understand the application of effective color usage.

ACCT-IGD-15. Students will identify and produce files utilizing different digital formats.

ACCT-IGD-16. Students will identify and demonstrate page layout terminology and tools.

ACCT-IGD-17. Students will identify and understand the differences in page layout, raster based photo manipulation, and vector based graphic software applications.

Unit Objectives

Students will be able to:

- understand and demonstrate how to design a page layout.
- discern how to incorporate the five elements in basic graphic design and will assess the application of effective color usage.
- understand the difference between primary, secondary, and complimentary colors.
- create documents /images and demonstrate the ability to save as digital files.
- demonstrate use of traditional and computer generated tools in the production of page layout.
- identify and demonstrate use of basic design principles.
- identify and understand the differences in page layout, raster based photo manipulation, and vector based graphic software applications.

Essential Questions

- How do the elements incorporated in basic graphic designs function together to create effective communication?
- What difference does image formatting have on the outcomes of page design?

Focus Questions

- Why does one need to understand the application of effective color usage?
- What do different digital formats have to do with the design process?
- What is the difference between rastor and vector based designs?
- Why is page layout crucial to effective communication?

Assessments

- Projects
- Quizzes and Tests on Unit Material

Skill Objectives

Students will:

- demonstrate how to log-on/boot-up, save, and print using a page layout program.
- design and produce a document using desired fonts, formatting, margins, indents, tabs, gutters, header and footer, guides, trims, folds, and proper leading.
- set up column grids for page layout according to job specifications.
- set up and select appropriate pagination for a given job.
- proofread, edit, and make corrections/adjustments to copy on screen.
- identify the utilization of the five elements of line, shapes, mass, texture, and color as they apply to basic design.
- demonstrate text alignment, element positioning, and rules of page design for printed matter.
- define CMYK and RGB and understand the difference between them and when to use them.
- describe the strengths and weaknesses of TIFF, EPS, PICT, JPG, GIF, PDF, PNG, and UMF in a Postscript environment.
- demonstrate how to use a file compression utility for file transfer or storage.
- demonstrate how to place scanned graphics/photos into existing page layout program.

		• produce digital files using appropriate DPI and PPI resolution for media. • identify and demonstrate use of layout methods/stages: (1) Thumbnail, (2) Rough, and (3) Comprehensive. • define and identify the differences between raster and vector based software. • demonstrate the ability to properly integrate text and images in a computer generated page layout. • demonstrate the ability to properly alter and enhance an image using a raster based photo manipulation software application. • demonstrate the ability to create a logo utilizing a vector based software application.

Unit 5 – Typography, 3 weeks top

Standards
    ACCT-IGD-18 Students will explore the origins of type by examining the evolution of letterforms.
    ACCT-IGD-19 Students will evaluate the function of typeface design in supporting legibility in a variety of media applications.

Unit Objectives	Essential Question	Assessments
Students will be able to: • explore the origins of type by examining the evolution of letterforms. • evaluate the function of typeface design in supporting legibility in a variety of media applications**.**	• How does the function of typeface design impact a message? **Focus Questions** • How do current communication technologies impact the role of typography in graphic design? • Why is readability such a key concept in graphic communication? • What role do different types of media play in the use of typography?	• Projects • Quizzes and Tests on Unit Material **Skill Objectives** Students will: • define the terms "pictograms" and "ideograms" and the distinctions between them and letterforms. • outline the evolution of alphabet, punctuation, upper case letters, lower case letters, and ligatures as elements of typography and explain the effect of each in its development. • identify and describe how current communication technologies impact emerging trends in typography. • define the concept of "mood and theme" in typography. • identify effects applied to typefaces to achieve "readability" and evaluate when each is – or is not – appropriate to use. • identify five major type categories and define distinguishing characteristics of each. • identify the four methods of alignment and describe how each impacts the presentation of type. • identify the three forms of presentation for typefaces (packaging, signage, and multimedia) and describe how each medium defines the legibility of typeface.

Unit 6- Graphic Output Processes, 3 weeks top

Standards
ACCT-IGD-20 Students will explore the different print processes.
ACCT-IGD-21 Students will explore the different electronic imaging processes.

Unit Objectives	Essential Questions	Assessments
Students will be able to: • explore the different print processes. • explore the different electronic imaging processes.	• How does the printing industry impact the world of information? • Why is it important to understand the role of the print industry in communication of ideas? **Focus Questions** • What are factors which influence the production of a printed message • What role does electronic pagination systems play in the development of new processes of outputs? • Why is it important to understand the impact of current and emerging technologies in graphic production?	• Projects • Quizzes and Tests on Unit Material **Skill Objectives** Students will: • create printed products by using at least two different print processes from design to completion. • describe the differences between the processes used. • identify the steps in making an image using one process. • demonstrate an understanding of the terms and technology of these processes. • create images by using an electronic media process from concept to delivery. • identify the steps in making an image using one process. • demonstrate an understanding of the terms and technology of the process.

Unit 7 – Bindery & Finishing, 3 weeks [top]

Standards
ACCT-GDP-16 Students will identify binding processes, describe the binding processes, and demonstrate the ability to bind a printed product.
ACCT-GDP-18 Students will identify, demonstrate, and practice proper, safe paper cutting techniques on various class projects.

Unit Objectives	Essential Question	Assessments
Students will be able to: • describe the binding processes, and demonstrate the ability to bind a printed product • demonstrate, and practice proper, safe paper cutting techniques on various class projects	• What are important production considerations in the use of binding for printed products when starting the design process? **Focus Questions** • What are important safety considerations in bindery operations? • Why should one be aware of special considerations when cutting different paper types? • Why is one type of binding more appropriate then another in a given application?	• Projects **Skill Objectives** Students will: • list the binding methods. • identify safety considerations in bindery operations. • identify production considerations in using different binds. • demonstrate binding techniques on various printed materials. • identify the types of paper cutters. • demonstrate proper, safe cutter operation. • identify problems or special considerations when cutting various paper types.